

REMARKS

Claims 1-18, 20-79, and 108 are pending. Claims 1-18 and 20-79 stand rejected. Claim 108 has been added. Reconsideration of the pending claims in view of the above amendments and following remarks is respectfully requested.

The Rejection of Claims 1-16, 20-25, 32-53, 62-69, and 71 Under 35 U.S.C. § 103(a)

Claims 1-16, 20-25, 32-53, 62-69, and 71 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,294,478, issued to Wanek et al., in view of U.S. Patent No. 4,018,646, issued to Ruffo. Withdrawal of the rejection is respectfully requested for the following reasons.

The Wanek reference describes a multi-layer composite that includes first and second surge management layers with an intermediate absorbent layer. The first surge management layer includes synthetic polymeric fibers. The second surge management layer includes hydrophilic fibers. The absorbent layer includes a high-absorbency material and means for containing the material. See Col. 2, lines 38-57.

The claimed invention relates to a composite having three strata with transition zones intermediate each stratum. The transition zone includes fibers from adjacent strata commingled substantially uniformly across the composite's width and along the composite's length. The Wanek reference fails to teach or suggest a multi-layer composite that includes a transition zone. The reference fails to teach or suggest a composite having a transition zone between the first surge management layer and the absorbent layer. The reference fails to teach or suggest a composite having a transition zone between the second surge management layer and the absorbent layer. The reference in no way teaches or suggests a composite having two transition zones; a first transition zone between the first surge management layer and absorbent layer, and a second transition zone between the absorbent layer and the second management layer.

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Furthermore, the reference teaches away from a composite having a transition zone between adjacent layers. At Col. 6, lines 40-45, the reference states:

It is not necessary that the first and second surge management layers be in direct contact with the absorbent layer. That is, additional intervening layers can appear between the surge management layers and the absorbent layer.

Clearly, if the first and second surge management layers are not in direct contact with the intermediate absorbent layer, there can be no transition zone between the surge management layers and the absorbent layer.

The absence of a transition zone in the composite described in the reference is further evidenced by the method by which the composite is made. At Col. 15, lines 57-61, the reference states:

In forming the composites of the present invention, a first surge management material selected from the samples described above is plied with an absorbent layer and the second surge management layer described above.

Plying the first management layer with an absorbent layer and a second management layer does not result in a composite having a first transition zone between the first surge management layer and absorbent layer and a second transition zone between the absorbent layer and the second management layer.

Because the Wanek reference states that the multi-layer composite need not have first and second surge management layers in direct contact with the intermediate absorbent layer and because the multi-layer composite is made by a plying process, the reference fails to teach, suggest, or provide any motivation to make, a composite that includes three strata with intermediate transition zones.

The Ruffo reference also fails to teach or suggest a multi-layer composite having a transition zone. The Ruffo reference describes an air-laid nonwoven web comprised of two

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different types of fibers, the web having a substantially continuous transition between the fibers composing each opposed face. One fiber type predominates at each face, but decreases in amount relative to a second fiber type substantially uniformly away from the face at which it predominates. See Col. 11, line 63 to Col. 12, line 1. At any given point between the opposed faces, there is no line of demarcation between the fiber types of the web. See Col. 12, lines 6-12. At each face, each fiber type is present in an amount of at least 5% by weight. See Claim 1, at Col. 26, lines 11-13.

The cited references provide no motivation to make a composite having a transition zone between adjacent strata. The Wanek reference describes a laminate having distinct layering with no transition zones between layers. The Ruffo reference teaches away from distinct layering by teaching a web having one continuous transition between fibers and having a blend of fibers at each face.

However, even if combined for the sake of argument, the cited references still fail to teach or suggest a composite having three strata with transition zones between strata such that fibers from adjacent strata are commingled substantially uniformly. Wanek fails to teach transition zones between substantially homogeneous strata, and Ruffo fails to cure the deficiencies of Wanek.

If combined, the references would teach or suggest a composite having five layers: a first surge management layer, an absorbent layer, and a second surge management layer (Wanek layers) with two intervening Ruffo layers, one between the first surge management layer and the absorbent layer, and the other between the absorbent layer and the second surge management layer. Even if each intervening Ruffo layer is comprised of a blend of fibers from the two adjacent layers, an interface between the five layers still exists because the layers would be *plied*

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together. To the contrary, the present invention does not have any interfaces between adjacent strata or between adjacent strata and transition zones.

Although in the abstract FIGURES 1 and 2A-2C may appear to show interfaces between strata and transition zones, the horizontal lines depicted in these figures are *not interfaces*, but merely schematic representations of transition zones intermediate and coextensive with the strata. A description of the wet-laying process for making the composite of the present invention confirms that there are no interfaces between strata and transition zones. Referring to FIGURE 3 and the specification at page 6, lines 26-30, dividers 214a and 214b within the headbox 212 create first, second, and third chambers, respectively, 226, 227, and 228. The length of the dividers 214a and 214b can be varied such that the point at which furnishes introduced into chamber 226, 227, and 228 meet and commence mixing can be adjusted. The greater the mixing of furnishes prior to ejection from the headbox, the greater the transition zone in the resultant composite. Thus, the cited references simply fail to teach or suggest a composite having transition zones between adjacent strata without interfaces between the strata, as taught by the present invention.

Because the cited references fail to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed, the claimed invention is nonobvious and patentable over the cited references. Withdrawal of this ground for rejection is respectfully requested.

The Rejection of Claims 17 and 18 Under 35 U.S.C. § 103(a)

Claims 17 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,294,478, issued to Wanek et al., in view of U.S. Patent No. 4,018,646, issued to Ruffo et al., and U.S. Patent No. 5,677,635, issued to Win et al. Withdrawal of the rejection is requested for the following reasons.

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The deficiencies of the teachings of the Wanek and Ruffo references noted above are not cured by the teaching of the Win reference. Because the cited references, either alone or in combination, fail to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed, the invention is nonobvious and patentable over the cited references. Withdrawal of this ground for rejection is respectfully requested.

The Rejection of Claims 27-31, 55-61, 70, and 72-79 Under 35 U.S.C. § 103(a)

Claims 27-31, 55-61, 70, and 72-79 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,294,478, issued to Wanek et al., in view of U.S. Patent No. 4,018,646, issued to Ruffo et al., and U.S. Patent No. 5,225,047, issued to Graef et al. Withdrawal of the rejection is respectfully requested for the following reasons.

The deficiencies of the teachings of the Wanek and Ruffo references noted above are not cured by the teachings of the Graef reference. Because the cited references, either alone or in any combination, fail to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed, the claimed invention is nonobvious and patentable over the cited references. Withdrawal of this ground for rejection is respectfully requested.

The Rejection of Claims 74-77 Under 35 U.S.C. § 103(a)

Claims 74-77 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,294,478, issued to Wanek et al., in view of U.S. Patent No. 4,018,646, issued to Ruffo et al., U.S. Patent No. 5,225,047, issued to Graef et al., and U.S. Patent No. 5,437,653, issued to Gilman et al. Withdrawal of the rejection is requested for the following reasons.

The deficiencies of the teachings of the Wanek, Ruffo, and Graef references noted above are not cured by the teachings of the Gilman reference. Because the cited references, either alone or in any combination, fail to teach, suggest, provide any motivation to make, or otherwise

render obvious the invention as now claimed, the claimed invention is nonobvious and patentable over the cited references. Withdrawal of this ground for rejection is respectfully requested.

New Claim 108

Claim 108 has been added. Claim 108 is a product-by-process claim. Support for Claim 108 can be found throughout the application as originally filed, for example, page 6, line 3 through page 7, line 8.

Conclusion

In view of the foregoing remarks, applicants believe that Claims 1-18, 20-79, and 108 are in condition for allowance. If any issues remain that may be expeditiously addressed in a telephone interview, the Examiner is encouraged to telephone applicants' attorney at 206.695.1755.

Respectfully submitted,

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